## BINDER FOR MOLDING CERAMICS

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## Abstract of JP2000355618

PROBLEM TO BE SOLVED: To obtain a binder which, when degreased, slowly generates a small quantity of heat and leaves little carbide by selecting a polyurethane having comb hydrophobic diol groups as the hydrophobic groups and having a molecular weight in a specified range. SOLUTION: This binder comprises a polymer comprising repeating units of formula I and repeating units of formula II, having a molar fraction of repeating units of formula I of 0.5-0.99 and a molar fraction of repeating units of formula II of 0.01-0.5, and having a weightaverage molecular weight of 10,000-1,000,000 as measured by GPC. In the formulae, A is such a divalent group that HO-A-OH is a water-soluble polyalkylene polyol having OH groups on at least both terminals and having a number-average molecular weight of 400-100,000; B is such a divalent group that OCN-B-NCO is a polyisocyanate compound selected from 3-18C polyisocyanates; D is such a divalent group that HO-D-OH is a comb hydrophobic diol of any one of formulae III to V: R1 to R6 and R8 to R11 are each a hydrocarbon group; R7 and R12 are each an alkylene; Y and Y' are each H, CH3 or the like; Z and Z' are each O, S or CH2; and (n), (n'), and (k) are each 0-15.

$$\frac{\left(0-A-O \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow} \stackrel{H}{\bigcirc} \stackrel{O}{\longrightarrow}\right)}{\left(0-D-O \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow}\right)} \qquad II$$

$$\frac{\left(0-D-O \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow}\right)}{R^2} \qquad III$$

$$\frac{HO}{R^2 + \left(0-A-O \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow}\right)} \qquad III$$

$$\frac{HO}{R^2 + \left(0-A-O \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow}\right)} \qquad III$$

$$\frac{HO}{R^2 + \left(0-A-O \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow} \stackrel{H}{\longrightarrow}\right)} \qquad III$$

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